

AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A system for improving the fixation of proximal fractures of the humerus, including:

at least one humeral nail to be inserted in a humeral shaft and comprising at least one transverse hole for the passage of a corresponding locking screw, said locking screw having a screw head and a screw body;

at least one fragment fixation pin to be inserted into the bone; and

~~the system further including~~ at least one intermediate plate element inserted between said screw head and the bone cortex surface so that the screw head abuts said plate;

wherein said intermediate plate element comprises an enlarged flange portion and two elongated arm portions extending from the flange portion, the arm portions defining a longitudinal direction,

wherein said intermediate plate element is slightly curved in the longitudinal direction to adhere substantially to the bone cortex surface,

wherein said elongated arm portions can be positioned astride the screw body before the final fastening of the screw head, and

wherein at least one of said transverse hole[[s]] has an internal partially threaded portion and the corresponding screw has an outside thread diameter smaller than the diameter of said at least one transverse hole that receives such a screw, and

wherein said at least one fragment fixation pin is embraced by a seat provided on the enlarged flange portion of said intermediate plate element.

2. (Cancelled)

3. (Previously presented) System according to claim 1, wherein said arm portions present rounded ends.

4. (Cancelled)

5. (Currently amended) System according to claim [[4]] 1, wherein said seat includes at least one hole formed in said enlarged flange portion of the intermediate plate element.

6. (Currently amended) System according to claim [[4]] 1, wherein said seat includes at least one hole formed in at least one of said elongated arm portions.

7. (Previously presented) System according to claim 1, wherein said intermediate plate element has a substantially rounded profile.

8. (Cancelled)

9. (Previously presented) System according to claim 1, wherein a second intermediate plate element is inserted between the screw head of a second locking screw and the bone cortex surface.

10. (Previously presented) System according to claim 9, wherein said second intermediate plate element is larger than a first intermediate plate element.

11. (Previously presented) System according to claim 9, wherein said second intermediate plate element comprises two elongated arm portions that can be positioned astride the screw body.

12. (Previously presented) System according to claim 9, wherein said first intermediate plate element comprises two elongated arm portions that can be positioned astride the

screw body before the final fastening of the screw head and said second intermediate plate element comprises two elongated arm portions that are longer than the arm portions of said first intermediate plate element.

13. (Cancelled)

14. (Previously presented) System according to claim 1, wherein said at least one of said transverse holes comprises a couple of opposite holes on opposite wall of a cannulated nail and the hole closer to the screw head includes said partially threaded portion.

15-22. (Cancelled)

23. (Currently amended) A method for reducing proximal fractures of the humerus by using a humeral nail to be inserted in a humeral shaft and comprising at least proximal transverse holes for the passage of corresponding locking screws, at least one screw of the locking screws having a screw head and a screw body; the method including the steps of:

producing an incision in the muscle surrounding the bone during a surgery phase to access a humeral fracture; and

inserting at least one intermediate plate element between the screw head and the bone cortex surface before the final fastening of the screw so that the head is abutting against the plate, and

inserting at least a fragment fixation pin in the bone through a hole of the intermediate plate element,

wherein the intermediate plate element comprises an enlarged flange portion and two elongated arm portions extending from the flange portion, the arm portions defining a longitudinal direction,

wherein the intermediate plate element is slightly curved in the longitudinal direction to adhere substantially to the bone cortex surface, and

wherein the elongated arm portions are positioned astride the screw body before the final fastening of the screw head.

24. (New) A system for improving the fixation of proximal fractures of the humerus, including at least one humeral nail to be inserted in a humeral shaft and comprising at least one transverse hole for the passage of a corresponding locking screw, said locking screw having a screw head and a screw body;

the system further including at least one intermediate plate element inserted between said screw head and the bone cortex surface so that the screw head abuts said plate;

wherein said intermediate plate element comprises an enlarged flange portion and two elongated arm portions extending from the flange portion, the arm portions defining a longitudinal direction,

wherein said intermediate plate element is slightly curved in the longitudinal direction to adhere substantially to the bone cortex surface,

wherein said elongated arm portions can be positioned astride the screw body before the final fastening of the screw head,

the system further including at least one fragment fixation pin to be inserted into the bone,

wherein said at least one fragment fixation pin is embraced by a seat provided on the enlarged flange portion of said intermediate plate element.

25. (New) System according to claim 24, wherein said seat includes at least one hole, the fragment fixation pin including a thin rod having a final threaded portion,

the diameter of said final threaded portion being smaller of the diameter of said hole in order to allow orientation of the fragment fixation pin according to the needs of engagement of other possible fragments of the humeral head.